

MEMORANDUM FOR: Ajit Singh
NGS Project Coordinator

Richard Hylle
State Project Coordinator

FROM: Charles W. Challstrom
Director, National Geodetic Survey

SUBJECT: LETTER INSTRUCTIONS:
South Dakota Federal Base Network Survey

You are hereby tasked to facilitate a geodetic survey in South Dakota as described in "[Standing Instructions: State-Sponsored FBN Surveys](#)" dated December 21, 2001. Utilize the following project identifiers as appropriate:

Title:	SOUTH DAKOTA FBN, 2002
Accession number:	GPS-1234
Task Numbers:	8K6D2000 (FBN) 8K6D4000 (CORS TIES)

A proposed station list, map, observation schedule, and list of project deliverables are attached.

STATE DELIVERABLES

STATE PROJECT COORDINATOR = Richard Hylle

South Dakota Department of Transportation, Division of Planning and Engineering, Office of Road Design, 700 East Broadway Avenue, Pierre, SD 57501

Telephone: 605-773-4460, Email: Richard.Hylle@state.sd.us

FILE TYPE	SOFTWARE	FILE NAME	DESCRIPTION	STATUS
R-files (raw GPS data)	receiver software receiver or TEQC	4444DDDS.XXX 4444DDDS.YYn,4444DDDS.YYo	Raw GPS observables in receiver-dependent format. Convert files to Receiver-Independent EXchange format.	
B-file (observation metadata)	CR8BB v.5.5.1 GEOID99	SD_FBN.bfl	Input observation data from observation logs. Add modeled geoid heights.	
D-file (station descriptions)	WDDPROC v.4.xx	SD_FBN.dsc	Input station data from description logs.	
Survey Forms	For each station: GPS observation logs , pencil rubbings , description log , visibility diagram .			
Photographs	Photos & formats described in " Requirements for Digital Photographs of Survey Marks & CORS Antennas "			
Field Project Report	A boilerplate report format is available.			

Detailed descriptions of project deliverables can be found in the [FGCS Bluebook Annex L](#)

NGS DELIVERABLES

NGS PROJECT COORDINATOR = Ajit Singh, National Geodetic Survey

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FILE TYPE	SOFTWARE	FILE NAME	DESCRIPTION	STATUS
GPS precise orbit files	IGS website	4444DDDS.YYd.Z	Precise ephemerides for GPS satellites in SP3 format.	
A-file (adjust configuration)	QQRECORD v.1.4	SD_FBN.afl	Modify A-file by adding QQ records from G-file.	
G-file (computed baselines)	PAGES v.2002.01.28	SD_FBN.gfl	Compute baselines from RINEX2 GPS data and orbit files.	
Free adjustment Constrained adjustment	ADJUST v.4.26	SD_FBN.free.adjust SD_FBN.cors.adjust	Compute ITRF positions from A-file, B-file, & G-file. Constrain ellipsoidal heights and CORS positions. Include UNIX "plotres_prompt.bsh" plots.	
Various DQA program outputs	includes COMPGB , OBSDES, NEWCHKOB, OBSCHK, WCHKDESC , etc. Explain any error messages encountered.			
Final Project Report	WordPerfect v.8	SD_FBN.wpd	See FGCS Bluebook Annex K for details.	